



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,015	01/22/2002	Hisashii Tsubata	Q66605	7652

7590 11/19/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3202

EXAMINER

KOPPIKAR, VIVEK D

ART UNIT	PAPER NUMBER
----------	--------------

1775

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

266

<b>Office Action Summary</b>	Application No. 10/051,015	Applicant(s) TSUBATA ET AL.	
	Examiner Vivek D Koppikar	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,10-12 and 18 is/are rejected.
- 7) ☒ Claim(s) 2,3,9 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/22/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
        1. ☒ Certified copies of the priority documents have been received.  
        2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **FINAL OFFICE ACTION**

### ***Election/Restrictions***

1. Newly submitted claim are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The process for using the product can be practiced with another materially different product, for example a semiconductor chip which has uneven patterns and protrusions on its surface.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 19-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 18 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent Number 2000-163730 (hereafter referred to as JP'730).

JP'730 teaches a magnetic recording medium with protrusions present on the surface of the medium. The areas around the protrusions are considered depressions (Translated Abstract and Figure 2). The depressions are not completely surrounded by protrusions.

4. Claims 11-12 are rejected under 35 U.S.C. 102(a) as being anticipated by JP '730.

Art Unit: 1775

In JP'730 the projections have a height of 20 to 100 nm (Translated Abstract) so the channels of the uneven pattern are of a depth of at least 20 to 100 nm.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 4 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Number 2001-49007 (hereafter referred to as JP '007).

JP'007 teaches a magnetic transfer medium with rough protrusions (Translated Abstract). The diameter (depth) of the protrusions are 4.5 nanometers or more.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'007 as applied to Claim 4.

JP'007 teaches a magnetic recording medium with an uneven pattern (protrusions) on the surface. A magnetic layer formed, in part, of polyamide film (pliable) is present on the surface of the medium. The examiner takes the position that the process limitations specifying the method used to form the rough surface do not provide a patentable distinction, absent a showing of evidence to the contrary, since JP'007 teaches rough protrusions.

Art Unit: 1775

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'007 as applied to Claim 4 above and in further view of US Patent Number 5,324,582 to Goto.

JP'007 does not teach that the protrusions are coated with or consist of granular material.

Goto teaches a magnetic recording medium with protrusions present on the medium. The protrusions are made from spherical grains. Forming the protrusions from grains allows better control of the number of protrusions that are formed on the magnetic medium (Col. 5, Ln. 18-37). At the time of the invention, one of ordinary skill in the art would have been motivated to form the protrusions in JP'007 out of granular material with the expectation of achieving better control of the number of protrusions on the surface of the medium as recited in Goto.

*Allowable Subject Matter*

10. Claim 2, 3, 9 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following are reasons for indicating allowable subject matter:

With regard to Claims 2 and 3, the prior art of record does not teach protrusions that have a narrower width than the track width. JP 61-230606 (hereafter referred to as JP'606) teaches a magnetic head with protrusions. The protrusions have a width smaller than that of a track. However the protrusions in JP'606 are like depressions as compared to the instant invention. In the instant invention the depressions are located below the top surface of the substrate while the protrusions are located above the top surface of the substrate.

Art Unit: 1775

With regard to Claims 9 and 17, JP'007 does not teach or suggest a volume ratio for the porous film (polyamide film) nor does JP'007 teach or suggest a specific value for the surface roughness.

***Response to Arguments***

12. All the claim objections set forth in the Office Action dated May 7, 2003 have been satisfactorily overcome by the arguments.

13. Claims 1, 11, and 12 were rejected under 35 U.S.C. 102(a) over JP'730 in the Office Action dated May 7, 2003. With regard to this reference applicants argue that JP'730 only discloses a magnetic recording medium while the instant invention is directed to a magnetic transfer medium.

The examiner takes the position that a magnetic transfer medium and a magnetic recording medium are both structurally and chemically similar and are in fact mirror images of each other. Therefore, JP'730 is analogous art with respect to the instant invention.

The applicants go on to argue that JP'730 is silent with respect to the claimed protrusions surrounding depression portions on less than all sides. Figure 2 in JP'730 clearly shows protrusions. The depressions are all those areas that are not protrusions and it is clear that these areas are not completely surrounded by protrusions (Figure 2).

14. Claims 4 and 10 were rejected were rejected under 35 U.S.C. 102(b) over JP'007 in the Office Action dated May 7, 2003. With regard to this reference the applicants argue that JP'007 does not teach or suggest a magnetic transfer medium transferring data to a slave medium.

Once again, with regard to this argument, the examiner takes the position that a magnetic transfer medium and a magnetic recording medium are both structurally and chemically similar

Art Unit: 1775

and are in fact mirror images of each other. Therefore, JP'007 is analogous art with respect to the instant invention.

15. Claim 6 was rejected in the Office Action dated May 7, 2003 under 35 U.S.C. 103(a) as being unpatentable over JP'007 in view of US Patent Number 5,324,582 to Goto. With regard to this rejection applicants argue that Goto does not teach or suggest a magnetic transfer medium having an uneven surface coated with granular material on the protrusions.

The examiner would like to clarify that the primary reference JP'007 is used to teach a magnetic recording medium (equivalent to a magnetic transfer medium as noted above) with rough protrusions (uneven surfaces) and Goto is used to show that granular material is used to coat the protrusions with grains since this results in better control of the number of protrusions that are formed on the magnetic structure.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vivek Koppikar** whose telephone number is **(703) 305-6618**. The examiner can normally be reached on Monday-Friday from 8 AM to 5 PM, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822. The fax phone numbers for the

Art Unit: 1775

organization where this application or proceeding are assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Vivek Koppikar*

Vivek Koppikar

11/17/03

*Deborah Jones*  
DEBORAH JONES

SUPERVISORY PATENT EXAMINER